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for transportation” while the insured’s damaged car is being repaired. No one would argue that such a policy precludes rental of an automobile with a radio and air conditioning, or other additional features and functionalities included in automobiles generally available in the marketplace -- even though these additional functionalities may not be “necessary for transportation.” The automobile itself is “necessary for transportation,” and additional features and functionalities do not change that fact. The insured is not required to rent a stripped-down Yugo.

The automobile market has developed enormously in terms of added functionality. While the Model T was limited to the transportation functionality, additional functionalities that were first viewed as novel and not “necessary” have since become accepted features of the “automobile” first radios, then air conditioning, now CD players; and in the coming years possibly cell phones and navigation systems. In the days of the Model T, the phrase “automobile necessary for transportation” would not have included a radio or air conditioning. Now it does. Similarly, recording technology has changed from record players with wax cylinders to vinyl discs to optical discs. Therefore, what is “necessary” to make a recording has also changed.

As technology and the marketplace develop, so does the accepted meaning of terms describing particular equipment that incorporates a technology. GM and Ford cannot expect to compete in the marketplace if they do not offer vehicles that meet market expectations, and it would be unreasonable to interpret “necessary” to mean outdated technology or only the bare minimum features necessary for transportation or to make a recording. In short, “necessary” as applied to automobiles and recording equipment must be interpreted in relation to the marketplace and standard industry practices.

The same is true for interconnection equipment, the only difference being that here the technology and the market are developing even more quickly. In 1996, for example, a typical Class 5 Switch was approximately 100 times the size of a typical ATM or modern “soft” switch; in 1996, a switch required a separate room. Now, several modern switches can fit comfortably within the space of a typical 10ft x 10ft collocation cage.³¹ With developing technologies, integration of functionalities that was impossible in 1996 is now very practicable, and, in fact, more efficient. Just as expanding technology has broadened the concept of “automobile” beyond the Model T to include additional functionalities not imagined by Henry Ford, so also the concept of “equipment necessary for interconnection” cannot be frozen at the level of the technology in effect in 1996. One of the principal purposes of the Telecommunications Act of 1996 was “to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans.”³² In light of this purpose, there is no reason to believe that Congress intended to freeze the implementation of “equipment necessary for interconnection” at the level of the technology available in 1996, precluding collocation of subsequently-developed multi-functional technology. Therefore, it is reasonable to interpret

³¹ Attachment A to these comments presents a graphic comparison of the respective sizes of traditional switching equipment and contemporary multifunction equipment. To the extent that Congress was concerned with “takings” issues, it can truly be said that modern packet data switches “take” much less space for collocation than did circuit. Further, because ILECs too have replaced old equipment with newer, much smaller equipment, substantial space has been freed up in ILEC central offices. In any event, ILECs are very well compensated by generally extremely high charges for collocation.

³² Sen. Rept. No. 104-230, 104th Cong. 1st Sess. (March 30, 1995) at pp. 1-2.

Section 251(b)(6) as permitting collocation of a wide range of telecommunications equipment that performs many functions in addition to enabling interconnection and access to UNEs.

Mpower is encouraged by Qwest's recent announcement that it will permit collocation of some multifunction equipment, including ATM and packet switches. Qwest has proposed revisions to its statement of generally available terms and conditions that permits collocation of this equipment, subject to some conditions.³³ Potentially, Qwest will permit collocation of any equipment other than equipment used exclusively for circuit switching. Mpower urges the Commission to build on this leadership shown by Qwest and require all ILECs to permit collocation of such equipment. However, the Commission should go further by providing that CLECs may collocate any equipment in collocation space once the threshold "necessary" test has been met, as discussed elsewhere in these comments.

2. Collocation of Multifunction Equipment is Supported by Judicial Interpretations of "Necessary"

Courts in analogous areas have already sanctioned and employed a definition of "necessary" that is considerably more liberal than "indispensable." In the context of state-mandated taking of private property, the term "necessary" has been accorded a broad definition. The present case is similar to *National Railroad Passenger Corp.* in which the issue was whether the Interstate Commerce Commission had authority to condemn a 55-mile segment of track in Vermont for the use of Amtrak, under a statute authorizing condemnation of property "required

³³ Statement of Generally Available Terms and Conditions for Interconnection, Unbundled Network Elements, Ancillary Services, and Resale of Telecommunications Services Provided by Qwest Corporation, Six State Workshop, September 27, 2000, Section 8.2.1.1.2.

for intercity rail passenger service.”³⁴ The Court of Appeals had set aside the condemnation, on the ground that a lesser action would have sufficed.³⁵ The Court of Appeals’ interpretation limited the condemnation authority “to property that was necessary, in the sense of indispensable, to Amtrak’s operations.”³⁶

The Supreme Court reversed, according deference to the ICC’s interpretation that “‘required’ can also mean ‘useful or appropriate,’” concluding that “Amtrak can find that an acquisition is required when it is a useful and appropriate way to accomplish its goals.”³⁷ Following the Supreme Court’s decision, a federal district court in Massachusetts held that Amtrak’s authority to condemn land “necessary for intercity rail passenger transportation” is not exceeded if such condemnation is “a useful and appropriate way to accomplish [Amtrak’s transportation] goals.”³⁸

These decisions are in accord with the definition of “necessary” in *Black’s Law Dictionary* (6th ed. 1990), which states that “[i]n eminent domain proceedings, it means land

³⁴ *National Railroad Passenger Corp. v. Boston and Maine Corp.*, 503 U.S. 407 (1992).

³⁵ *Boston and Maine Corp. v. I.C.C.*, 911 F.2d 743, 750 (D.C. Cir. 1990).

³⁶ *National Railroad Passenger Corp.*, *supra*, 503 U.S. at 417.

³⁷ *Id.*, 503 U.S. at 418, 419

³⁸ *National Railroad Passenger Corp. v. 4945 Square Feet of Land*, 1 F. Supp.2d 79, 82 (D.Mass. 1998). See also, *Greyhound Corp. v. Carter*, 124 So.2d 9, 10 (Fla. 1960) (“‘necessity’ as used in statute . . . does not mean an absolute and indispensable necessity, but rather that proposed service is reasonably necessary to meet the public needs”); *Railway Express Agency, Inc. v. Alabama Public Service Commission*, 91 So.2d 489 (Alabama 1956); *Pennsylvania Railroad Co. v. Pennsylvania PUC*, 124 A.2d 685 (Pa. 1956) (same); *Texas Eastern Transmission Corp.*, 14 FPC 38, 49 (1955) (“We do not view the term [public

(con’t.)

reasonably requisite and proper for accomplishment of [the] end in view, not absolute necessity of particular location.”³⁹

Similarly here, it is “reasonably requisite and proper for accomplishment of the end in view” for a CLEC to interconnect and access UNEs by any equipment that is generally available and is capable of those uses. Any ILEC position that “necessary” means “indispensable,” like the similar contention made by Amtrak’s opponents, must be rejected.⁴⁰

3. Inability to Collocate Multifunction Equipment Would Create Economic and Practical Barriers to Competition

Apart from the fact that so-called multifunction equipment is eligible for collocation notwithstanding its other functions so long as it enables interconnection and access to UNEs, collocation of such equipment is also “necessary” because it would effectively thwart CLECs’ ability to compete if they could not do so. This may be readily seen by a quick review of the costs involved. First, the CLEC would have to run lines from the ILEC Central Office to its own switch site. The costs for this alone could be substantial. For example, in January 1999

convenience and necessity] as meaning indispensability.”).

³⁹ Black’s also points out other contexts in which “necessary” has a broad meaning. For example, “[w]ith respect to taxation (*i.e.*, deduction of necessary expenses in carrying on a trade or business), [it] means appropriate and helpful in furthering the taxpayer’s business or income producing activity.” *Id.*

⁴⁰ Of course, there is no merit to any ILEC suggestion that physical collocation of CLEC equipment in ILEC central offices results in any “taking” of ILEC property without just compensation in violation of the 5th Amendment. Collocation space is the most expensive real estate in America. Far from receiving no compensation, ILECs are over-compensated for the collocation space that they provide to CLECs. The Commission should give absolutely no weight to any ILEC claims in this proceeding that provision of physical collocation to CLECs results in any economic burden to ILECs.

Mpower received exorbitant quotes from Southwestern Bell for copper extensions to a central office. The costs quoted for 600 wire pairs were \$48,250 for installation, and \$190.00 per month, with a four month installation interval. In addition, it would be necessary for the CLEC to obtain space outside the central office for the multifunction equipment which Mpower estimates would cost \$113,000 for space build-out and an additional \$15,000 monthly. And, this is on top of collocation space in the ILEC central office which would be necessary for interconnection and access to UNEs. When these costs are multiplied by the many times they would be incurred in order to use multifunction equipment to provide service, with attendant delays, it is apparent that collocation of such equipment is necessary in order for CLECs to be able to effectively compete. This is especially true for less populated and rural areas. Accordingly, the Commission should also conclude that collocation of multifunction equipment is necessary because of the economic and practical barriers to competition that would be created by a mandatory location of such equipment at a separate location.

4. Requiring ILECs to Permit Collocation of Multifunction and Stand-Alone Equipment Is a Reasonable Condition of Collocation

a. The Commission Has Authority to Prescribe Reasonable Terms and Conditions for Collocation under Section 251

Section 251(c)(6) requires ILECs to provide physical collocation of equipment necessary for interconnection and access to UNEs on rates, terms, and conditions that are reasonable and nondiscriminatory. Thus, the Commission may define the "reasonable conditions" pursuant to

which ILECs must offer physical collocation.⁴¹ Pursuant Section 251 (c)(6), therefore, the Commission may, and should, require that ILECs permit collocation of multifunction equipment and some stand-alone equipment as a reasonable condition of providing collocation generally. Mpower emphasizes that the obligation of ILECs to provide physical collocation of equipment “necessary for interconnection or access to unbundled network elements”⁴² is not an abstract one. ILECs must offer physical collocation “on rates, terms, and conditions that are just and reasonable, and nondiscriminatory”⁴³ This fundamental requirement is the governing regulatory standard under which the Commission is authorized to adopt provisioning rules that will ensure competitive parity between collocating CLECs and their incumbent hosts. The court’s decision in *GTE v. FCC* is not to the contrary. There, the court struck down regulations that variously allowed CLECs to choose where to establish collocation on the LEC’s property, prohibited LECs from requiring CLECs to use separate entrances to access their own equipment, and barred LECs from requiring competitors to use separate or isolated rooms or floors. However, the court did not rule out that the Commission could establish reasonable guidelines for the provisioning of collocation space to achieve the manifest statutory objectives of the Act. To the contrary, the court merely stated that, on remand, “the FCC will have an opportunity to refine its regulatory requirements to tie the rules to the statutory standard. . . .”⁴⁴

⁴¹ *In re Trans Alaska Pipeline Rate Cases*, 436 U.S. 631, 653 (1978).

⁴² 47 U.S.C. § 251 (c) (6).

⁴³ *Id.*

⁴⁴ *GTE v. FCC*, 205 F.3d at 426.

In carrying out its authority to establish terms and conditions for collocation, the Commission is not bound to adopt rules that require LECs to provide only the minimum terms and conditions “necessary” to allow for interconnection. To be sure, the court stated that “[t]he statute requires only that LECs reasonably provide space for ‘physical collocation of equipment necessary for interconnection or access to unbundled elements at the premises of the local exchange carrier,’ nothing more.”⁴⁵

However, the court was merely defining the equipment for which incumbents are required to provide collocation space. Once equipment is determined to be *necessary* for interconnection or access to UNEs and thus eligible for collocation on incumbent premises -- the ILEC’s offering must satisfy the requirement that the terms and conditions of such collocation be “reasonable” and “nondiscriminatory.”⁴⁶ Indeed, once collocation is deemed necessary for interconnection and access to UNEs under Section 251(c)(6), the requirement that the incumbent offer collocation on “reasonable” and “nondiscriminatory” terms and conditions applies *a fortiori*.

b. Requiring Collocation of Multifunction Equipment is a Reasonable Condition

As explained, not allowing collocation of multifunction equipment would astronomically increase a CLEC’s cost of providing competitive services, especially in smaller and rural markets, because of the need to obtain otherwise unnecessary separate space and communications links to backhaul traffic from the ILEC central office. This would also substantially delay, and otherwise handicap, CLEC entry into new markets.

⁴⁵ *Id.* at 423.

At the same time, however, allowing collocation of multifunction and stand-alone telecommunications equipment would increase CLEC occupation of ILEC central offices not at all, or at most marginally. In fact, with the increasing efficiency and compactness of telecommunications equipment, collocation of many types of equipment requires little more than a refrigerator size space. Many CLECs have already built and paid for large collocation spaces (usually at exorbitant prices that make it the most expensive real estate in the country).⁴⁷ Simply stated, therefore, it is reasonable to permit CLECs to collocate multifunction equipment because it would greatly facilitate their ability to compete and would not have any significant impact on ILECs central office space.

Mpower emphasizes again that ILECs' prices for collocation space are so high that it would make little sense for CLECs to collocate equipment beyond what is "necessary" for interconnection and access to UNEs. Further, the local telecommunications marketplace is in transition to competition during which CLECs must have the ability to collocate the equipment that they have already chosen to collocate as ILECs may do. ILECs are attempting to use the collocation provisions of the statute as a sword against CLECs and to hinder competition, when

⁴⁶ 47 U.S.C. § 251(c)(6).

⁴⁷ The Commission has recognized that ILECs routinely charge in the range of \$300,000 for collocation space. *In the Matters of Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers, Petition of US WEST Communications, Inc. for Forbearance from Regulation as a Dominant Carrier in the Phoenix, Arizona MSA*, CC Dockets Nos. 96-262, 94-1, 98-157, and CCB/CPD File No. 98-63, Fifth Report and Order and Further Notice of Proposed Rulemaking, FCC 99-206, 14 FCC Rc. 14221 at ¶ 81 (1999) ("Pricing Flexibility Order").

in fact these provisions are intended to be used as a shield to protect CLECs from ILECs'

resistance to offering collocation on reasonable terms and conditions. For all these reasons, it is a reasonable condition of making collocation available generally that ILECs permit collocation of multifunction equipment.

C. Once the Threshold Test for Collocation Is Met, CLECs Should Be Permitted to Collocate Any Equipment Subject Only to Reasonable Space Limitations

As discussed, the Commission should permit CLECs to permit collocation of multifunction equipment as a reasonable condition of offering collocation generally. The Commission should go a step further, however, and provide that, once the threshold test for eligibility for collocation has been met, a CLEC may collocate any equipment subject to reasonable space limitations. Mpower submits that this is the only practical way for ILECs and the Commission to administer provision of collocation pursuant to Section 251(c)(6). Neither an ILEC or the Commission is able, or should seek, to engage in the type of detailed operational oversight that would be required to assure that only equipment "necessary" for interconnection or access to UNEs is collocated by CLECs once other equipment meeting the threshold has been deployed. Nor is there any need for such oversight since CLECs have no incentive to place unnecessary equipment in collocation space given that collocation space is arguably the most expensive real estate in America. Instead, to the extent that any limit on CLECs' use of collocation space is required, the only realistic approach for the Commission to take is to permit CLECs to use collocation space for any purpose subject to the limitation that CLECs may use an amount of space limited by current standard industry practices, or as defined by the Commission. In other words, if an ILEC routinely offers 100 square feet of collocation space, then the CLEC may use it for collocation of any type of equipment once the threshold "necessary" test has been

met for any equipment. This will assure that CLECs' use of collocation space does not unduly burden ILECs while at the same time permitting CLECs to effectively use that space.

D. ILECs Must Be Required to Permit CLECs to Self-Provision Cross-Connection Between Collocators in ILEC Central Offices

1. Section 251(c)(6) Applies to Interconnection Between CLECs on ILEC Premises

The Commission should determine that the 251(c)(6) requirement that ILECs provide physical collocation of equipment "necessary for interconnection . . . at the premises of the local exchange carrier" may be read under "the 'ordinary and fair meaning of [the statute's] terms,'"⁴⁸ to require interconnection at the ILEC central office with other CLECs' networks as well as with the ILEC network, provided the other CLECs have interconnection points "at the premises of the local exchange carrier." Under the literal definition of the statutory language, cross-connection is "interconnection . . . at the premises of the local exchange carrier."

ILECs will undoubtedly argue that the intended meaning of the statute is to provide only for collocation of equipment necessary for interconnection to the ILECs' network. Nothing in the legislative history, however, supports that limited statutory interpretation.

Requiring ILECs to permit CLEC cross-connection under section 251(c)(6) is also consistent with the structure of the statute. Section 251(a) requires all carriers - including the CLECs - to interconnect with other carriers. Moreover, section 251(c)(6) requires any conditions imposed on interconnection to be "nondiscriminatory." Denial of cross-connection would violate the requirement that ILECs provide collocation on a nondiscriminatory basis

⁴⁸ *GTE v. FCC, supra*, 205 F.3d at 424

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because the ILEC could connect with a collocating CLEC at the ILEC's central office, but another CLEC could not. Given that CLECs need to collocate at ILEC central offices, ILECs have the opportunity to interconnect with CLECs on an efficient and readily available basis. Cross-connection is necessary to put each collocating CLEC in a position to achieve the same interconnection with other CLECs as the ILEC itself is able to do. Even if "interconnection" were to be defined narrowly to encompass only interconnection with the ILECs' network, any condition denying cross-connection would violate the statute's prohibition against "nondiscriminatory" conditions. The result is the same: under section 251(c)(6), the ILECs cannot refuse cross-connection to any collocating CLEC. Any contrary rule would violate one of the basic purposes of the Act - and of section 251(c)(6) - to provide CLECs with "nondiscriminatory access."⁴⁹

2. Cross-Connection is a Reasonable Condition of Collocation

For the same general reasons that permitting collocation of multifunction equipment is a reasonable condition of collocation generally, the Commission should also require ILECs to permit CLECs to self-provision cross-connection with other CLECs as a reasonable condition of offering collocation. Self-provisioned cross-connection is vital to CLECs' ability to compete and avoids extra cost and delay yet does not significantly affect ILECs.

Of particular concern is that the inability to directly cross-connect with other co-located CLECs would effectively thwart CLEC advanced optical networking initiatives. Such networks require the use of dark fiber capacity leased from other competitive carriers because adequate

⁴⁹ House Rept. No. 104-204, *supra*, at p. 73.

optical cross-connect services from ILECs are either unavailable and/or would degrade the quality of service that CLECs are able to provide in comparison to that available with direct cross-connection between CLECs. As with all cross-connects obtained from an ILEC, obtaining an optical cross-connect from an ILEC adds needless additional cost and installation time for each circuit. In particular, the use of ICB (Individual Case Basis) pricing by ILECs in many cases leaves an open door for both unrestrained costs and delays. Moreover, currently defined UNEs only include rates up to, but not exceeding, OC-48 levels. Today, CLECs are evaluating hardware capable of OC-192 and even OC-768 levels. CLECs would be blocked from using the advanced technology that enables them to build efficient, competitive networks if they are not permitted to self-provision cross-connection at these levels. In addition, even where they are available, using ILEC optical cross-connects will reduce performance, because a so-called "optical-electrical-optical translation" must occur. This significantly increases latency above optimum performance levels.

In addition, use of ILEC hardware for optical cross-connection raises equipment compatibility issues that further limit technology choice and likely decrease a CLEC's ability to deploy the most modern and advanced solutions available today. Use of ILEC hardware also reduces circuit reliability because additional electronic hardware will be placed in the circuit. In contrast, direct self-provisioned cross-connection between CLECs does not raise any of these issues or thereby deny any users competitive service quality choices.

At the same time, permitting CLECs to self-provision cross-connection in ILEC central offices will not significantly increase occupation of ILEC premises, or other burdens on ILECs. In many cases, cabling can be run between adjacent collocation cages or equipment racks. In

other situations where cabling must be run for the distance between CLECs' respective collocation spaces, it is not likely there would be any increased burdens to ILECs' central office arrangements since central offices by their very nature are set up for running cabling and performing interconnection. In any event, the Commission could establish reasonable limits on CLECs' self-provisioning of cross-connection, such as requiring that only technically qualified personnel may perform this work. It is not required under the statute for the Commission to ban CLEC self-provisioned cross-connection. Instead, for the reasons discussed above, the Commission may, and should, require ILECs to permit CLECs to self-provision cross-connection as a reasonable condition of offering collocation of equipment.

In this area too, Mpower is encouraged by Qwest's apparent plans to permit CLECs to self-provision cross-connection.⁵⁰ Qwest has shown leadership in this area as well. The Commission should require that CLECs be allowed to self-provision cross-connection.

E. The Commission Should Establish Reasonable General Collocation Provisioning Standards

The Commission can take several steps to help assure parity of access to ILEC central offices in accordance with the requirement that ILECs provide nondiscriminatory physical collocation. The Commission can start by re-adopting the collocation requirements in ¶ 42 of the *Collocation Order*, which the court vacated only because it found that the Commission had provided insufficient justification under the statute for such requirements. First, the Commission

⁵⁰ Statement of Generally Available Terms and Conditions for Interconnection, Unbundled Network Elements, Ancillary Services, and Resale of Telecommunications Services Provided by Qwest Corporation, Six State Workshop, September 27, 2000, Section 8.4.6.

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should reinstate the requirement that CLECs be permitted “to collocate in any unused space in the ILEC premises.”⁵¹ Mpower does not believe that in originally imposing this requirement, the Commission intended to place arbitrary authority in the hands of CLEC regarding where CLECs may collocate. To dispel this impression, the Commission should clarify that such a requirement is intended to prevent the ILEC from unilaterally imposing arbitrary restrictions that would prevent collocation of CLEC equipment in order to reserve the space for possible future use by the incumbent.

Second, the Commission should reinstate its prohibition on the ILEC’s unilaterally imposing an arbitrary or unreasonable requirement that the CLEC construct a room, cage, or similar structure for its equipment, collocate equipment on a separate floor, or create a separate entrance to its collocation space.⁵² Such separation requirements go beyond increasing the costs borne by CLECs; they constitute clear barriers to entry not faced by the incumbent. For example, a requirement that CLECs collocate on separate floors or rooms creates the potential for ghettoization of CLEC equipment, reducing the universe of space available to CLECs, while

⁵¹ *Id.*

⁵² ILECs frequently justify separate room/isolated space requirement based on “security” concerns. However, the cost of resolving security concerns should not be placed solely at the feet of the CLECs, but should also be shared by the ILECs. Moreover, State commissions have found less restrictive ways to address the purported ILEC security concerns, such as security cameras, monitoring systems, or badges. *Ordinary Tariff Filing of New York Telephone Company to Provide for the introduction of Cageless Collocation Open Environment (CCOE); rates and regulations for Adjacent Structures; and, clarifications and modifications to existing collocation offerings*, Case 99-C-0715, and consolidated case 95-C-0657, Order Directing Tariff Revisions at pp. 4-5 (NY PSC 1999).

leaving the ILEC free to locate its equipment anywhere.⁵³ Requiring CLECs to construct separate entrances, instead of leaving CLECs free to use existing entrances, increases costs for CLECs.

Finally, the Commission should specifically prohibit an ILEC from establishing intermediate points of interconnection in lieu of direct connection to its network facilities. Here, the Commission can rely *both* on the technical feasibility of such direct connection and the ILEC's obligation to provide collocation on just and reasonable and nondiscriminatory terms and conditions. Under the terms of the Act, ILECs are obligated to provide interconnection "at any technically feasible point within the carrier's network."⁵⁴ This requirement, by definition, precludes a requirement of indirect interconnection in circumstances where direct connection is feasible. Moreover, such a requirement places the CLEC at less than competitive parity with the ILEC, thus violating the incumbent's obligation to offer interconnection at just and reasonable and nondiscriminatory terms and conditions unless justified by technical, operational, safety, engineering or security considerations. Accordingly, the Commission should prohibit ILECs from requiring *indirect* interconnection unless the ILEC certifies in writing that it cannot overcome the conditions that mandate such requirement.

⁵³ For instance, in New York, Bell Atlantic unilaterally imposed a requirement that CLECs place their equipment in a separate lineup at least 10 feet away from working BA-NY equipment. CLECs argued that this rule limits the amount of space available, increases costs and may force CLECs to collocate in a separate room. The NY PSC agreed and disallowed this practice. *Id.*

⁵⁴ 47 U.S.C. § 251(c)(2)(B).

F. The Commission Should Establish Minimum Provisioning Intervals for the Full Range of Collocation Arrangements

The FCC has also requested comment on: (1) whether it should reduce the maximum provisioning interval for physical collocation arrangements to a number shorter than 90 days; and (2) whether it should establish separate minimum installation intervals for various other types of collocation.

Mpower applauds the decision of the Commission to adopt a maximum provisioning interval for physical collocation of 90 days. However, as the ILECs have gained more experience with collocating CLEC equipment, and in installing equipment used to provide advanced services both for the ILEC itself and its tenant CLECs, Mpower believes that shorter intervals are appropriate. Less generous, but still shorter than the 90 day interval for full collocation, is the 45-business day interval adopted by the Pennsylvania Commission for collocation arrangements.⁵⁵ The Commission should establish this same provisioning interval as a national standard.

Mpower would add, however, that the Commission should adopt considerably *shorter* intervals where collocation necessitates *less* than the full complement of activities necessary for LECs to provision a full blown collocation application – *i.e.*, for modifications or additions to existing collocations, collocations within already prepared or conditioned space, or where the

⁵⁵ See *Petition of Covad Communications Company for an Arbitration Award Against Bell Atlantic-Pennsylvania, Inc., Implementing the Line Sharing Unbundled Network Element; Petition of Rhythms Links, Inc., for an Expedited Arbitration Award Implementing Line Sharing*, Docket Nos. A-310696F0002 and A-310698F0002, Opinion and Order at p. 23 (Pa PUC, August 17, 2000).

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CLEC agrees to perform the work necessary to install a collocation cage. Of particular interest to Mpower is the provisioning interval for augmenting existing collocation space necessary to install equipment associated with advanced services, such as splitters and cabling. Such collocation typically involves attaching equipment to existing structures with a few bolts and the attaching of pre-prepared cables. Acknowledging that such collocation necessarily involves less planning and logistical issues, Verizon has reduced the information required for applications for collocation augments by two-thirds. This reduction in paperwork with its implications for the reduction in administrative tasks should correspond to a shorter provisioning interval, especially when taken together with the decreased physical work required for collocation augments. Thus, for example, the Texas Commission has affirmed GTE's obligation to provide collocation augments within 30 calendar days, which time frame SWBT already has specified in its collocation tariff.⁵⁶ A similar reduction in provisioning intervals for collocation is appropriate where the CLEC is willing to construct portions of the collocation itself.

IV. COLLOCATION AT REMOTE TERMINALS

A. Collocation at Remote Terminals of Line Cards, DSLAMS, and Other Equipment is Necessary for Interconnection and Access to UNEs

As the use of fiber based DLC systems becomes more ubiquitous, due to the accelerating growth in the provision of advanced services, remote terminals are fast becoming the equivalent of the central office.⁵⁷ The Commission has already recognized the status of remote terminals as

⁵⁶ See Docket No. 22168, *Petition of Covad Communications Co. and Rhythms Links, Inc. Against Southwestern Bell Telephone Co. and GTE Southwest Inc, etc.*, Interim Award, at 25.

⁵⁷ *UNE Remand Order* at 218.

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essential aggregation points for access to loops and other essential network facilities.⁵⁸ ILECs

must be required to provide adequate collocation space to CLECs at remote terminals.

The critical role of the remote terminal in facilitating the provision of advanced telecommunications services cannot be overstated. Traditionally, with first generation xDSL technology, it was assumed that the customer must reside within 18,000 feet of the Digital Subscriber Line Access Multiplexer ("DSLAM") to receive reliable xDSL service. However, placing next generation DLC or IDLC equipment in forward-deployed remote terminals overcomes this operational roadblock, allowing local exchange companies to push deeper into neighborhoods and install or upgrade neighborhood broadband gateways containing digital electronics. Thus, for example, SBC is on record with respect to its Project Pronto initiative for its claim that:

SBC has two primary goals: to bring advanced broadband data services to nearly all customers, and to integrate its voice and data networks to more efficiently and effectively transport that traffic. The more than \$6 billion Project Pronto initiative should make these goals a reality. The strategy includes plans to install fiber optics deeper into neighborhood networks and to install or upgrade approximately 25,000 neighborhood broadband gateways containing *next generation digital loop carriers*. These neighborhood gateways will expand the reach of DSL service by taking the capabilities of the network closer than ever before to customers.⁵⁹

⁵⁸ *Id.*

⁵⁹ SBC Communications, Inc., *Project Pronto: SBC's Network Vision and Strategy* (November 1999) (emphasis added).

The strategic assumptions underlying SBC plans have been widely recognized (and emulated) by others in the ILEC industry. In a recent public forum on *Competitive Access to Next-Generation Remote Terminals* held at the FCC on May 10, 2000, senior executives from three of the largest regional Bell Operating companies, together with representatives of major switch manufacturers and competitive local exchange companies, all *agreed* in touting the advantages of next generation remote terminals in providing advanced services. Several of the ILEC representatives spoke at length concerning their *current* plans to deploy next generation DLC as an integral part of their independent plans to push fiber deeper into neighborhoods in order to offer DSL service. Notably, Mr. Masters of SBC expanded on the company's previous boasts made on behalf of Project Pronto, stating that:

[w]e have a very large initiative going on to try to put a lot more remote terminals in our network. . . . We said earlier we have about 35,000 remote terminals, and they were adding another roughly 13,000. *We're upgrading 7-10,000 of existing ones to provide a broadband service, next generation DSL, and actually a broadband capability to the network bay.*⁶⁰

Mr. McNamara of Bell-South echoed this sentiment, stating that "*all* of our growth today is going on next generation products. We aren't deploying *any* old technology to DLC any more. It is all next generation products with copper feeder."⁶¹

⁶⁰ Tr. 12 (emphasis added).

⁶¹ *Id.* at 14 (emphasis added).

B. ILECs Must Have an Absolute Obligation to Provide Sufficient Collocation Space at Remote Terminals

The Commission should give little weight to ILEC justifications and excuses for not providing collocation at remote terminals. It is rare that there will ever be insufficient space, if for no other reason than because the ILEC can always provision additional space. The difficulty and expense of expanding remote terminal space is far less than with respect to central office space. Essentially, the Commission should require ILECs to provide collocation at remote terminals period.

Nowhere in Section 251 (c)(6) of the Act is there any suggestion that the duty to “provide physical collocation of equipment necessary for interconnection or access to unbundled network elements,” 47 U.S.C. § 251(c)(6), is limited to central offices. As ILECs move to deploy many central office functions to remote terminals, collocation at the remote terminal becomes increasingly “necessary” to achieve interconnection and meaningful access to UNEs. To the extent that any service – that is provided by an ILEC – *cannot* be provided by the CLEC without collocation at the remote terminal, the ILEC must be obligated to provide such collocation. Otherwise, the ILEC cannot possibly satisfy its obligation to provide nondiscriminatory interconnection “that is at least equal in quality to that provided . . . to itself. . . .”⁶² Nor can it satisfy its obligation to provide access to UNEs on “just and reasonable” and “nondiscriminatory” terms and conditions.⁶³

⁶² 47 U.S.C. § 251(c)(2)(C).

⁶³ 47 U.S.C. § 251(c)(3).

Thus, under this statutory scheme, collocation at remote terminals is clearly "necessary."

Without the ability to collocate DSLAMs, line cards and other equipment at remote terminals, CLECs are essentially denied interconnection with ILEC DLC equipment and access to the feeder subloop, thereby limiting xDSL service by CLECs to customers served by spare, home-run copper loops shorter than 18,000 feet.

ILECs have used the remote terminal as an obstacle to competition. For example, ILECs have sought to reserve to themselves, and to deny to CLECs, space for collocation at remote terminals on the blatantly discriminatory pretext that such space is necessary to enable the ILEC to serve future demand. SBC has also sought to limit pricing for additional space at remote terminals to onerous Special Construction Arrangements.⁶⁴ Similarly, in proceedings in Verizon's region, Verizon has taken the position that it need not allow data CLECs to engage in line sharing over DLC loops, contending that, by definition, line sharing can only be done over home-run copper.⁶⁵ Verizon has rejected the "plug and play option" advocated by Covad -- whereby CLECs collocate line cards in ILEC DSLAMS -- as somehow incompatible with the

⁶⁴ *In the Matter of Ameritech Corp., Transferor, and SBC Communications, Inc., Transferee, for Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules*, CC Docket No. 98-141, ASD File No. 99-49, Second Memorandum Opinion and Order, Appendix A, Section 5(c) (Sept. 8, 2000) ("Project Pronto Order").

⁶⁵ *See, e.g., Petition of Covad Communications Company for an Arbitration Award Against Bell Atlantic Pennsylvania, Inc., Implementing the Line Sharing Unbundled Network Element; Petition of Rhythms Links, Inc. for an Expedited Arbitration Award Implementing Line Sharing*, PA PUC Docket Nos. A-310696F0002 and A-310698F0002, Recommended Decision at p. 38 (June 28, 2000) ("PA ALJ Order")

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functionality of its own equipment, offering instead to permit adjacent collocation, where CLECs are left to obtain the necessary permits and easements and overcome the aesthetic objections of local homeowners to ubiquitously deployed remote terminal "farms."

As stated by Mpower in its letter of July 27, 2000,⁶⁶ ILECs should have an absolute obligation to provide collocation space at remote terminals. There should be no distinction between current and future collocation space in remote terminals and pricing should be consistent with forward-looking incremental cost pricing. This follows from the fact that remote terminals are a part of the overall telecommunications network with which CLECs seek to interconnect at UNE-based prices. In addition, ILECs should not be permitted to use retail and wholesale demand projections as the basis for denying collocation space. An ILEC should be required to provide additional space regardless of its demand forecasts. Otherwise, ILECs can effectively block CLECs from collocating in remote terminals by a combination of undersizing and overforecasting, knowing that CLECs may not be able to construct adequate space at all or in time to compete.⁶⁷ To the extent that an ILEC would be permitted to address space exhaustion by use of an adjacent or near remote terminal, the Commission should make clear that the ILEC should bear the responsibility and cost of resolving all issues relating to easements and land-use restrictions. This is appropriate because the CLEC is a wholesale customer of the ILEC pursuant

⁶⁶ Letter from Mpower to Carol Matthey, CC Docket 98-141, August 27, 2000.

⁶⁷ As noted, as fiber is deployed in the loop, collocation in remote terminals is becoming as important as collocation in central offices for provision of competitive advanced services.

to the 1996 Act. Moreover, the ILEC should be required to provision the near remote terminal within 90 days.

C. Disclosure of Remote Terminal Information Should be Required

The same pre-application information as to space availability is needed for remote terminals as for central offices. CLECs, particularly those providing advanced services, need to know if there is collocation space available at the remote terminal.

When a CLEC makes a request of an ILEC for collocation space at a remote terminal, the ILEC should, within 10 calendar days, provide it with schematic drawings of the remote terminal itself and of all adjacent space, as well as information concerning: (1) the amount of collocation space available, and dimensions of any discrete blocks of space; (2) separate identification, through color coding or similar scheme, of the space already occupied by the ILEC, by type of equipment; (3) the number of other collocators and space they occupy; (4) any modifications or augments to the space since the last report; and (5) plans on the part of the incumbent to make any additional space available.

D. ILECs Should be Required to Deploy Remote Terminals That Support Interconnection by CLECs.

As mentioned above, the remote terminal is becoming the new central office. ILECs must not be permitted to artificially constrain interconnection at remote terminals by using equipment that unnecessarily restrains CLEC ability to effect interconnection there. Mpower acknowledges that any restriction on the ability of an ILEC to select the equipment that best serves its needs is an inconvenience. However, at the same time, some uniformity is necessary to achieve the timely provision of competitive advanced services offerings under the Act. Thus, the

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ILEC should be required to ensure that the equipment they deploy to interface with CLEC

equipment is outfitted with universal interfaces and protocols to enable efficient interconnection

on just and reasonable and nondiscriminatory terms and conditions.

V. LOCAL COMPETITION RULES SHOULD BE UPDATED IN LIGHT OF NEXT GENERATION NETWORK ARCHITECTURES

A. "Project Pronto" and Richardson, Texas Implementations Demonstrate the Need for New Local Competition Rules to Govern ILEC Deployment of Next Generation Network Architectures

In the *Collocation Reconsideration Order and NPRM*, the Commission seeks comment on whether the deployment of new architecture and electronics by ILECs requires the Commission to revisit its local competition rules, particularly its rules on unbundling. In light of ILECs' deployment of so-called next generation network technologies, the Commission's inquiry could not come at a more crucial time. Indeed, it would be hard to imagine ILEC network deployments that would more dramatically show the need for revised Commission rules that will assure that CLECs are able to compete in the local telecommunications market. SBC in Project Pronto has proposed network deployments that would permit that incumbent carrier to determine the pace and scope of competition in the provision of advanced services. In Richardson, Texas, SBC has virtually foreclosed DSL competition by unilaterally removing copper loops.⁶⁸

Mpower is very concerned that "ILECs will extend their monopoly power over local telephony to advanced services by operating and controlling next-generation networks in a manner that ensures that only the ILECs (and their data affiliates) will be able to recognize the

⁶⁸ CC Docket No. 98-141, Letter from Mpower Communications Corp., to Carol Matthey, Deputy Chief, Common Carrier Bureau at p. 2-4 (August 15, 2000)(*"Mpower Richardson Texas* (con't.)